

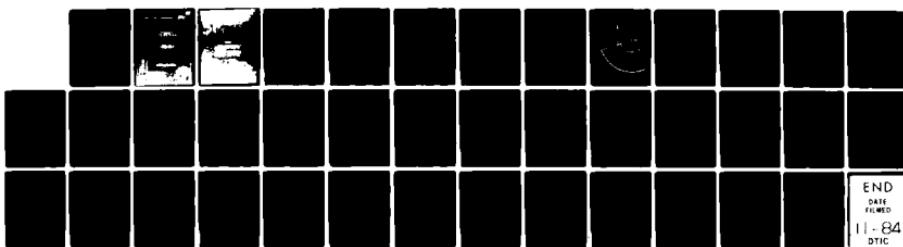
AD-A146 531

19318B MLRS MISSILE NUMBER 429 381 463 376 417 363  
ROUND NUMBER VG27/FUE . . (U) ARMY ELECTRONICS RESEARCH  
AND DEVELOPMENT COMMAND WSMR NM ATM.. D C KELLER  
UNCLASSIFIED AUG 84 ERADCOM/ASL/DR 1352

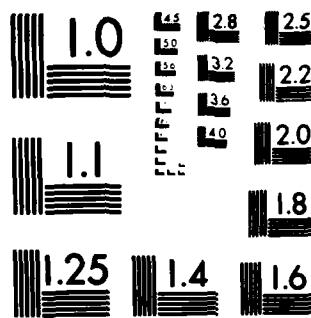
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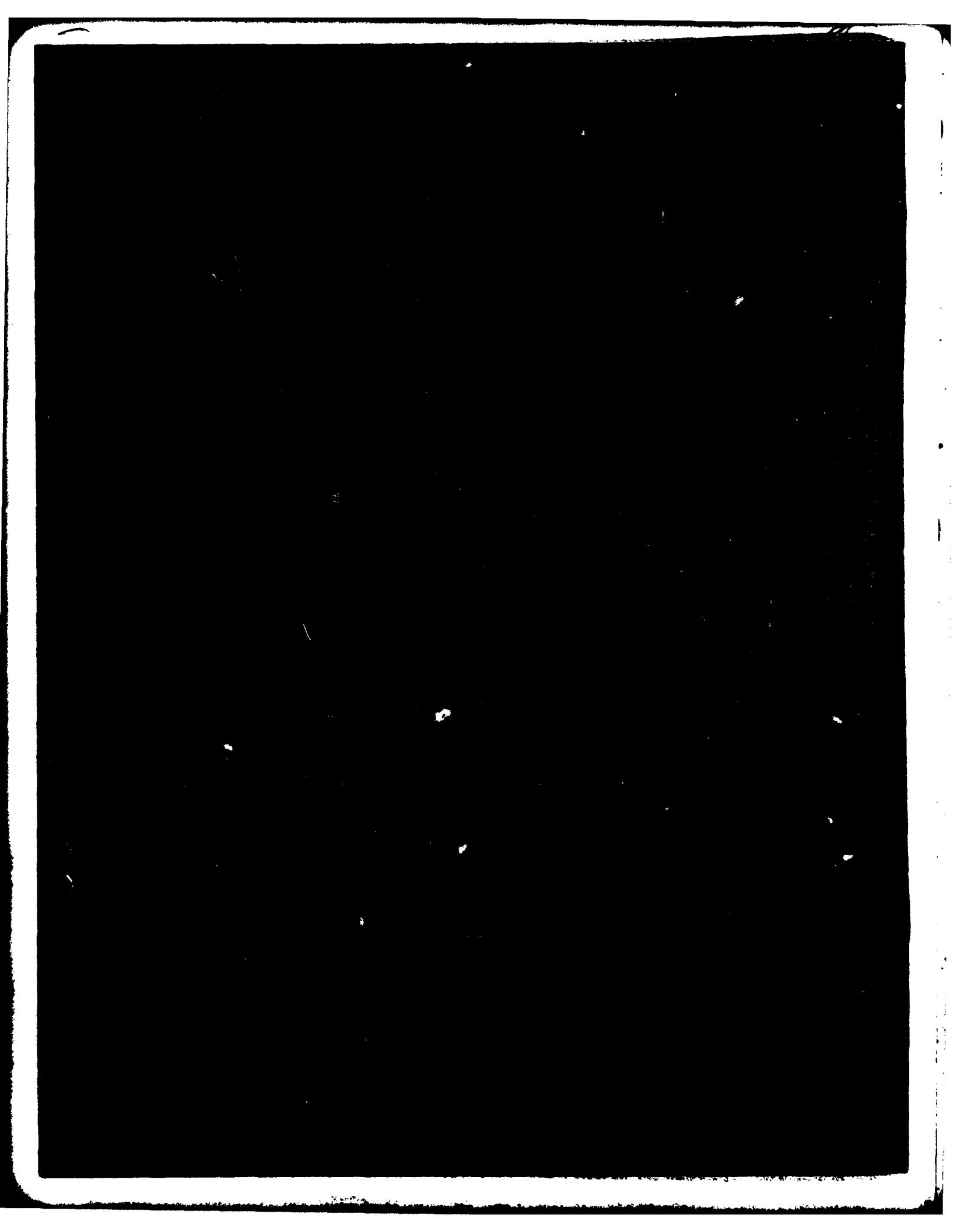


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NATIONAL BUREAU OF STANDARDS 1963-A

AD-A146 531



## UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR-1352	2. GOVT ACCESSION NO. <i>A146 531</i>	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19318B MLRS Missile Number 429, 381, 463, 376, 417, 363 Round Number V627/FOE-1 THRU V632/FOE-6		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s) White Sands Meteorological Team		6. PERFORMING ORG. REPORT NUMBER DA Task 1F665702D127-02
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002		12. REPORT DATE 17 July 1984
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research and Development Cmd Adelphi, MD 20783		13. NUMBER OF PAGES UNCLASSIFIED
16. DISTRIBUTION STATEMENT (of this Report)		15. SECURITY CLASS. (of this report) UNCLASSIFIED
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) Approved for public release; distribution unlimited.		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19318 MLRS, Missile Number 429, 381, 463, 376, 417, 363, Round Number V627/FOE-1 THRU V632/FOE-6 are presented in tabular form.		

## CONTENTS

INTRODUCTION -----	1
DISCUSSION -----	1
GENERAL AREA MAP -----	2
LAUNCH AREA DIAGRAM -----	3
TABLES:	
1. Surface Observation Taken at 0931 MDT at LC-33-----	4
2. Anemometer-Measured Wind Data Taken at LC-33 Meteorological Tower -----	5
3. Launch Area Pilot-Balloon Measured Wind Data -----	6
4. Aiming and T-Time Computer Met Message Data -----	7
5. WSD Significant Level Data at 0800 MDT -----	8
6. WSD Upper Air Data at 0800 MDT-----	9
7. WSD Mandatory Levels at 0800 MDT -----	10
8. Significant Level Data at 0800 MDT-----	11
9. SMR Upper Air Data at 0800 MDT -----	12
10. SMR Mandatory Levels at 0800 MDT -----	13
11. Don Significant Level Data at 0800 MDT -----	14
12. Don Upper Air Data at 0800 MDT -----	15
13. Don Mandatory Levels at 0800 MDT -----	16
14. WSD Significant Level Data at 0845 MDT-----	17
15. WSD Upper Air Data at 0845 MDT -----	18
16. WSD Mandatory Levels at 0845 MDT-----	19
17. SMR Significant Level Data at 0845 MDT -----	20
18. SMR Upper Air Data at 0845 MDT -----	21
19. SMR Mandatory Levels at 0845 MDT -----	22
20. Don Significant Level Data at 0845 MDT -----	23
21. Don Upper Air Data at 0845 MDT -----	24
22. Don Mandatory Levels at 0845 MDT -----	25

CONTENTS Cont'd

23. WSD Significant Level Data at 0930 MDT -----	26
24. WSD Upper Air Data at 0930 MDT -----	27
25. WSD Mnadatory Levels at 0930 MDT -----	28
26. SMR Significant Level Data at 0932 MDT -----	29
27. SMR Upper Air Data at 0932 MDT -----	30
28. SMR Mandatory Levels at 0932 MDT -----	31
29. Don Significant Level Data at 0930 MDT -----	32
30. Don Upper Air Data at 0930 MDT -----	33
31. Don Mandatory Levles at 0930 MDT -----	34

## INTRODUCTION

19318B MLRS, Missile Numbers 429, 381, 463, 376, 417, and 363, Round Numbers V627/FOE-1 THRU V632/FOE06, were launched from LC-33, White Sands Missile Range (WSMR). New Mexico, at 0931:36, 0931:41, 0931:45, 0931:50, 0931:54 and 0931:59 MDT, 17 July 1984. The scheduled launch times were 0930 MDT with a 4.5 second separation.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations

#### a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm/m}^3$ ), wind direction and speed, and cloud cover were made at the LC-33 Met Site at ±0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

#### b. Upper Air

(1) Low level wind data were obtained from pilot-balloon observations at:

SITE AND ALTITUDE  
LC-33            2km

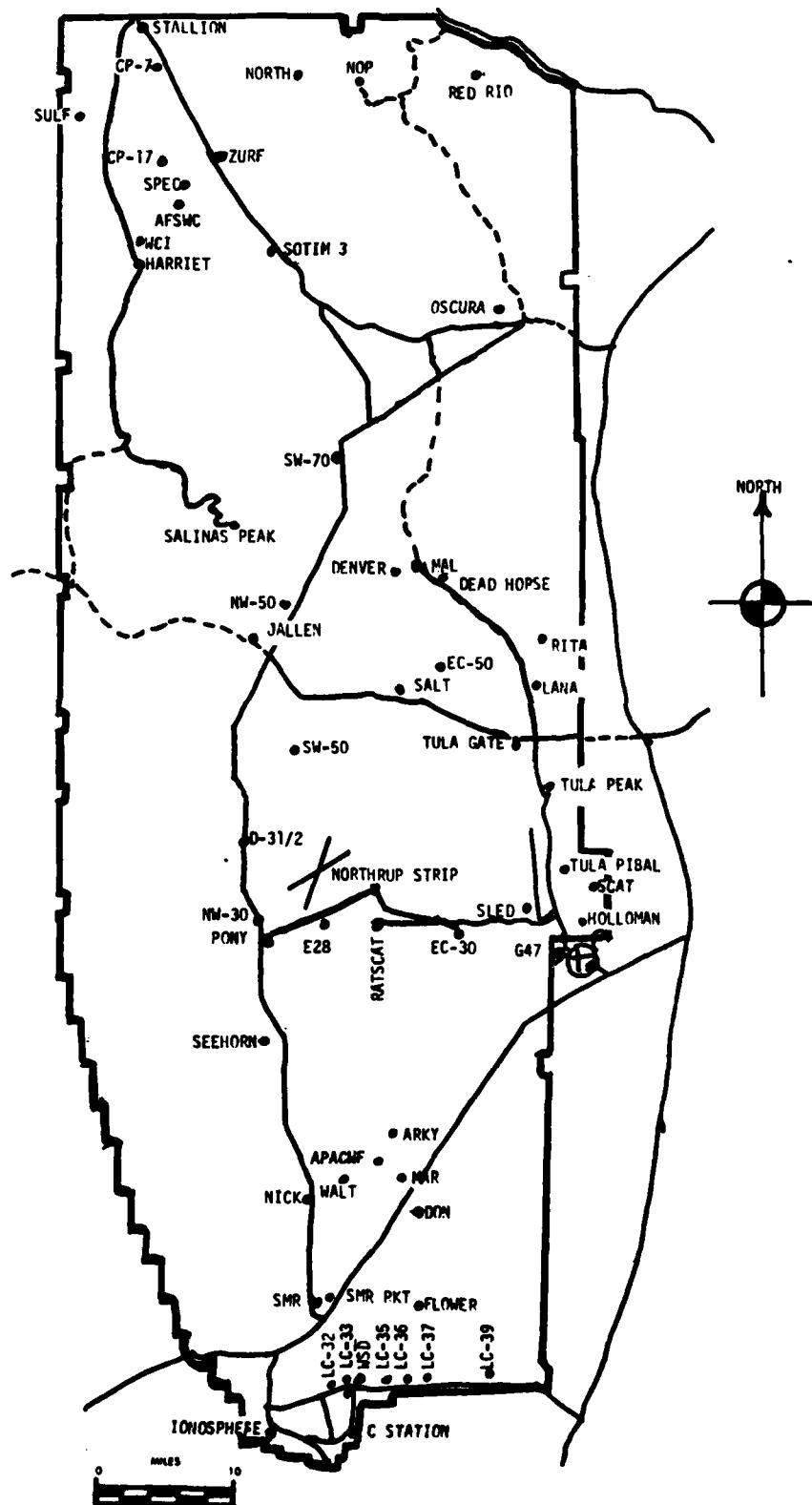
(2) Air structure data (rawinsonde) were collected at the following Met Sites.

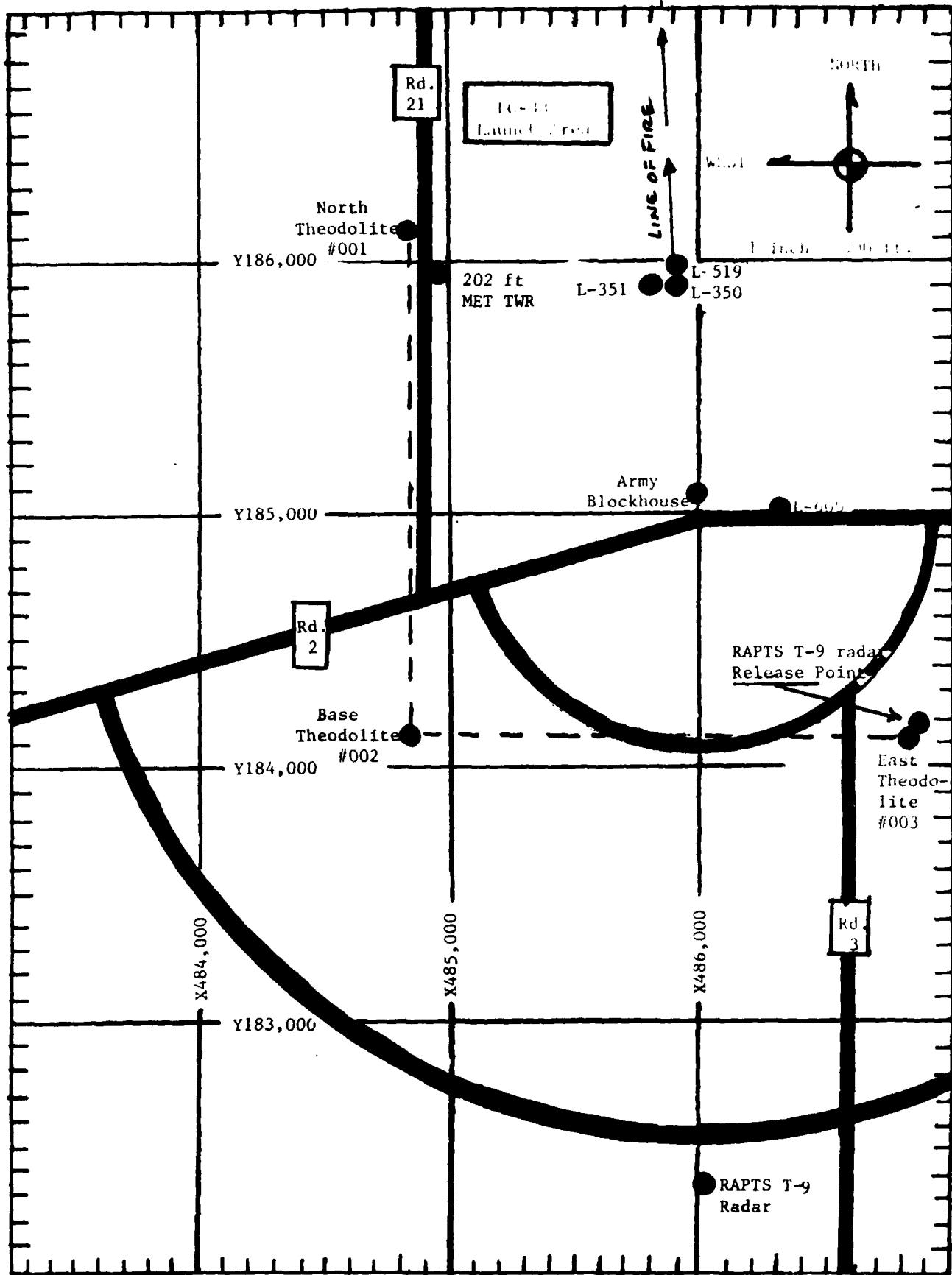
SITE AND TIME  
WSD 0800, 0845 and 0930 MDT  
SMR 0800, 0845 and 0932 MDT  
DON 0800, 0845 and 0930 MDT

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	<input type="checkbox"/>
By _____	
Distribution/	
Availability Codes	
Avail and/or	
Distr	Special
A-1	



## WSMR METEOROLOGICAL SITES





مکالمہ نوادراتی

15

DATE 17 JUL 84

STATION 1 C-33

$$x = \underline{484.982.64} \quad y = \underline{185.957.73} \quad H = \underline{3995.00}$$

卷之三

WILSON

DESTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS	
	1st LAYER		2nd LAYER		3rd LAYER			
ANT	TYPE	HGT	ANT	TYPE	HGT	ANT	TYPE	HGT
2	CU	6500	1	AC	11,000	1	C1	25,000

PSYCHOPEDAGOGIC CONVENTION

TIME: MDT	0931
DRY BULB TEMP.	27.5
WET BULB TEMP.	19.2
WET BULB DEPR.	8.3
Dew Point	15.4
RELATIVE HUMID.	48

TABLE 2

LC-33 METEOROLOGICAL TOWER  
ANEMOMETER MEASURED WIND DATA

WSTM COORDINATES X=484,982.64 Y=185,957.73 H=3983.00 (BASE)

DATE 17 July 1984 0931 M D T

DAY MONTH YEAR TIME

LEVEL #1			LEVEL #2		
12 FT AGL			62 FT AGL		
T-TIME (SEC)	DIR (DEG)	SPEED (KTS)	T-TIME (SEC)	DIR (DEG)	SPEED (KTS)
T-30	020	09	T-30	025	09
T-20	019	07	T-20	022	08
T-10	006	06	T-10	022	05
T- 0 (1st T)	006	04	T- 0 (1st T)	008	05
T+10	342	05	T+10	004	05
T+20	354	03	T+20	360	06
T+30	004	02	T+30	357	05
T+40			T+40		
T+50			T+50		
T+60			T+60		
LEVEL #3			LEVEL #4		
102 FT AGL			202 FT AGL		
T-TIME (SEC)	DIR (DEG)	SPEED (KTS)	T-TIME (SEC)	DIR (DEG)	SPEED (KTS)
T-30	022	09	T-30	009	09
T-20	020	07	T-20	004	07
T-10	025	06	T-10	021	08
T- 0 (1st T)	007	04	T- 0 (1st T)	023	06
T+10	001	08	T+10	341	05
T+20	358	07	T+20	351	04
T+30	358	06	T+30	014	06
T+40			T+40		
T+50			T+50		
T+60			T+60		

TABLE 3

T-TIME PILOT-BALLOON MEASURED WIND DATA  
 DATE 17 July 1984

SITE: LC-33

TIME: 0931 MDT

WSTN COORDINATES:

X= 486,037.24

Y= 182,350.16

H= 3,977.30

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
surface	060	08
100	MISG	MISG
210	281	04
270	312	09
330	344	06
390	021	08
550	025	04
650	013	08
750	360	08
950	028	06
1150	069	10
1450	090	09
1550	072	12
1750	079	10
2150	057	07

Data obtained from a RAPTS T-9 Radar Tracked pilot-balloon observation

TABLE 4

Aimimg and T-Time Computer Met Message Data  
17 July 1984

WSD 0800 MDT	SMR 0800 MDT	DON 0800 MDT
METCM1324064	METCM1325064	METCM1326063
171400122880	171400122880	171400123879
00107010 29980880	00018010 29900880	00498004 29740879
01019012 29860870	01008010 29850870	01606008 29660868
02127008 29780845	02046009 29760845	02026002 29680844
03219011 29520807	03214011 29480807	03247009 29490806
04224010 29140761	04223011 29090762	04227011 29110760
05223005 28740718	05222009 28660718	05191008 28710717
06134001 28340676	06041003 28330676	06161002 28370675
07419002 27980637	07126003 28020637	07079001 28070636
08156004 27650599	08107003 27600599	08010002 27660598
09139006 27220563	09127006 27170563	09115003 27260562

WSD 0845 MDT	SMR 0845 MDT	DON 0845 MDT
METCM1324064	METCM1325064	METCM1326063
171480122880	171480122880	171480123879
00053010 30200880	00018010 30320880	00533006 30070879
01008015 29960870	01040011 30050870	01578008 29860869
02085004 29710845	02026008 29800845	02105001 29710844
03201009 29480807	03214007 29510807	03263005 29530806
04207011 29140762	04207012 29130762	04231011 29120760
05184008 28740718	05191008 28750718	05203010 28690717
06151005 28370676	06122003 28350677	06140005 28320675
07008002 28050637	07044001 28010637	07518003 28040636
08102003 27670599	08080002 27630599	08004003 27650598
09129004 27300563	09187004 27170563	09122004 27290562

WSD 0930 MDT	SMR 0932 MDT	DON 0930 MDT
METCM1324064	METCM1325064	METCM1326063
171550122880	171550122880	171550123879
00107006 30390880	00018010 30430880	00533008 30250879
01631010 30180870	01029011 30150870	01614010 30080869
02029008 29800845	02058008 29870846	02620007 29800844
03122008 29410807	03155008 29520808	03178006 29570806
04184010 29090762	04204009 29120762	04204012 29180761
05164008 28710718	05183010 28730718	05174011 28740717
06085005 28350676	06114005 28370677	06095003 28390676
07090003 28060637	07000000 28070637	07108001 28100636
08150004 27620599	08080001 27660599	08563001 27710599
09196005 27270563	09165006 27290563	09196003 27370563

STATION ALTITUDE 2089.73 FT. 1 MSL  
 17 JULY 94  
 0800 MDT  
 ASCENSION NO. 38C

SIGNIFICANT LEVEL DATA  
 1500Z 20 JULY 1994  
 WHITE SANDS  
 ASCENSION NO. 38C

GEODETIC COORDINATES  
 32°40'06" LAT ECG  
 106°37'03" LON DGC

TABLE 5

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FLEET	TEMPERATURE DEGREES	DEWPONT CENTIGRADE	REL.HUM. PERCENT
379.6	5989.0	24.6	14.7	54.0
976.6	4087.4	23.5	14.2	56.0
850.0	4972.1	23.2	12.2	50.0
811.9	6285.5	20.9	8.9	46.0
761.6	8088.3	16.8	7.7	55.0
732.0	9194.8	14.1	6.5	60.0
700.0	10430.0	11.1	7.2	77.0
680.6	10841.1	9.5	6.6	82.0
660.2	11216.2	9.1	5.5	78.0
674.8	11435.6	8.9	2.3	63.0
662.0	11955.1	8.5	-5	53.0
637.0	12996.8	5.6	-2.0	58.0
628.2	13370.8	4.6	-1.0	66.0
695.5	14799.9	2.1	1.2	94.0
1555.4	16637.7	-2.9	-3.3	97.0
548.0	16987.5	-3.4	-4.1	95.0
539.0	17466.5	-4.2	-8.6	70.0
530.0	17840.6	-4.6	-6.6	86.0
514.0	18637.3	-6.3	-11.8	65.0
500.0	19158.5	-6.4	-8.5	85.0

STATION ALTITUDE 9530.00 FEET MSL  
 17 JULY 94 0800 MDT  
 ASCENSION NO. 21C

UPPER AIR DATA  
 194002Z150  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.77033 LON DEG

STOEMETRIC PRESSURE  
 ALTITUDE  
 MSL FEET MILLIBARS DEGREES CENTIGRADE

STOEMETRIC PRESSURE ALTITUDE MSL FEET MILLIBARS DEGREES CENTIGRADE	TEMPERATURE AIR DEGREE CENTIGRADE	REL.HUM. PERCENT	SPEED OF WIND, DATA CM/CUBIC MEETER	DIRECTION, DEGREES(TH)	WIND, DATA KNOTS	INDEX OF REFRACTION
3959.0	24.6	54.0	1021.7	674.7	69.0	1.000299
4000.0	24.5	54.2	1021.8	674.5	69.2	1.000295
4500.0	23.4	53.2	1008.4	673.1	71.5	1.000291
5000.0	23.2	52.1	992.1	672.7	84.7	1.000286
5500.0	22.3	49.9	978.2	671.6	97.6	1.000275
6000.0	21.4	48.4	964.4	670.5	110.0	1.000267
6500.0	20.4	46.9	951.0	669.3	120.7	1.000262
7000.0	19.5	45.5	937.9	668.0	123.0	1.000256
7500.0	18.1	42.2	925.1	666.7	124.7	1.000255
8000.0	17.0	40.2	912.5	665.3	125.7	1.000251
8500.0	15.8	38.0	900.1	663.9	125.4	1.000247
9000.0	14.6	36.7	888.0	662.5	124.9	1.000243
9500.0	13.4	6.7	875.7	661.1	120.7	1.000241
10000.0	12.1	7.1	863.5	659.8	113.7	1.000239
10500.0	10.8	7.1	851.8	658.3	110.5	1.000237
11000.0	9.3	6.1	841.1	656.5	115.1	1.000232
11500.0	7.2	1.9	829.3	655.5	262.0	1.000216
12000.0	6.9	0.6	815.1	654.8	246.4	1.000210
12500.0	6.8	-1.3	804.2	653.1	241.9	1.000206
13000.0	5.9	-2.0	797.5	651.4	214.5	1.000203
13500.0	5.2	-2.7	781.5	650.4	129.5	1.000202
14000.0	4.6	0.6	769.4	649.4	105.5	1.000202
14500.0	3.6	0.2	757.5	648.3	82.3	1.000201
15000.0	2.7	0.9	746.4	647.0	65.2	1.000194
15500.0	1.6	0.7	736.2	645.3	58.5	1.000194
16000.0	0.9	0.2	726.2	643.6	66.1	1.000185
16500.0	-1.2	-1.7	716.3	642.0	73.5	1.000185
17000.0	-2.5	-3.0	705.7	640.8	84.7	1.000180
17500.0	-3.4	-4.2	694.5	639.6	93.5	1.000171
18000.0	-4.2	-6.6	682.8	638.8	72.0	1.000170
18500.0	-4.9	-7.6	672.8	637.4	1.000164	
19000.0	-6.0	-10.8	662.6	637.0	1.000162	
	-6.4	-10.0	75.1			

TABLE 6

STATION ALTITUDE 3949.00 FEET VSL  
17 JULY 84 0800 MDT  
ASCENSION NO.

WEATHER LEVELS  
1940020180  
WHITE SANDS

GEODETIC COORDINATES  
32.4004° LAT DGS  
106.37033 LON DLS

TABLE 7

PRESSURE GEOPOTENTIAL MILLIBARS	FLET	TEMPERATURE		REL.HUM. PERCENT	WIND DATA	
		AIR DEWPONT DEGREES CENTIGRADE	DEGREE(S) IN CENTIGRADE		DIRECTION DEGREES(CIN)	SPEED KNOTS
850.0	406P.	23.2	12.2	50.	83.5	2.7
800.0	669P.	20.0	8.6	46.	122.0	10.3
750.0	b51P.	15.8	7.2	57.	125.4	6.6
700.0	10420.	11.1	7.2	77.	110.3	3.7
650.0	12436.	7.1	-1.2	55.	242.1	1.9
600.0	14582.	2.5	1.0	90.	78.6	3.4
550.0	16871.	-3.3	-3.9	96.	82.3	6.2
500.0	19331.	-6.6	-8.5	85.		

STATION ALTITUDE 3967.0 FEET MSL  
17 JULY 1980 MDT  
ASCENSION NO. 1<sup>st</sup>

SIGNIFICANT LEVEL DATA  
1990060136  
S M R

TABLE 8

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT
979.9	997.3	24.0	53.0
872.5	4240.0	23.4	50.0
850.0	4989.4	23.2	43.0
790.4	7057.8	19.0	45.0
729.5	9338.7	13.3	60.0
700.0	10638.3	10.2	74.0
674.7	11444.4	9.1	52.0
660.3	12031.8	8.4	-1.1
635.2	13081.1	6.0	61.0
600.2	14598.7	1.9	89.0
592.2	14954.8	1.0	96.0
576.8	15926.4	-1.1	97.0
552.9	16759.6	-3.9	98.0
529.9	17377.6	-6.4	-9.0
		70.0	

GEODETIC COORDINATES  
32°46'34" LAT DEG  
106°42'30" LON DEG

STATION ALTITUDE 297.30 FEET MSL  
17 JULY 84 0800 MDT  
ASCENSION NC. 126

UPPER AIR DATA  
199000136  
S M R

TABLE 9

GEOMETRIC ALTITUDE MSL FLEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TH) KNOTS	INDEX OF REFRACTION
3997.1	879.9	24.0	13.8	53.0	1024.5	673.9	10.0
4000.0	879.8	24.0	13.8	53.0	1024.5	673.8	10.1
4500.0	666.6	23.3	11.6	47.6	1009.9	672.8	25.4
5000.0	645.7	23.2	9.9	43.0	993.5	672.5	49.6
5500.0	634.9	22.2	9.2	43.5	979.7	671.2	78.1
6000.0	622.3	21.1	8.4	44.0	966.1	670.0	101.1
6500.0	606.0	20.1	7.7	44.5	952.7	668.8	119.3
7000.0	792.0	19.1	6.9	44.9	939.5	667.6	128.2
7500.0	778.0	17.9	6.7	47.9	926.8	666.2	127.7
8000.0	764.2	16.6	6.5	51.2	914.3	664.8	125.4
8500.0	750.7	15.4	6.3	54.5	901.9	663.4	120.9
9000.0	737.4	14.1	6.0	57.8	889.8	661.9	120.7
9500.0	724.2	12.8	5.8	62.1	878.0	660.4	123.1
10000.0	711.2	11.6	5.6	68.4	866.3	658.8	120.1
10500.0	698.4	10.1	5.4	72.7	854.7	657.3	112.7
11000.0	685.8	9.6	2.6	61.7	841.5	656.4	89.2
11500.0	673.3	9.0	-0.7	51.9	828.5	655.5	17.4
12000.0	651.1	8.4	-1.1	51.1	815.2	654.8	5.1
12500.0	649.0	7.3	-1.0	55.5	803.4	653.5	13.5
13000.0	637.1	6.2	-0.9	60.2	791.9	652.2	6.5
13500.0	625.3	4.9	-0.4	68.7	780.8	650.7	72.1
14000.0	613.8	3.5	-0.0	78.0	769.9	649.2	73.1
14500.0	602.4	2.2	-0.3	87.2	759.3	647.7	65.2
15000.0	591.2	0.4	-0.3	96.0	748.5	646.2	54.4
15500.0	580.1	-1.2	-0.7	96.6	737.5	644.9	2.8
16000.0	569.2	-1.3	-1.7	97.1	726.9	643.6	61.9
16500.0	558.4	-3.0	-3.3	97.7	717.8	641.3	4.2
17000.0	547.8	-4.1	-5.9	87.1	707.4	639.9	1.0

STATION LATITUDE 39°57'30" N SL  
17 JULY 86 0800 MDT  
ASCENSION NO. 136

MANDATORY LEVELS  
196000Z 0136  
S W R  
TABLE 10

GEODETIC COORDINATES  
32°48.034 LAT DEG  
106°42.307 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FLEI	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES(CTN)	SPEED KNOTS
PSN.0	4986.	23.2	9.9	43.	6.4
600.0	6711.	19.7	7.3	45.	125.4
750.0	8523.	15.3	6.3	55.	120.5
700.0	10428.	10.2	5.8	74.	113.9
650.0	12445.	7.4	-1.0	55.	8.8
600.0	14590.	1.9	.3	89.	2.3
550.0	16874.	-4.0	-5.1	92.	3.7

STATION ALTITUDE 403.49 FEET MSL  
17 JULY 84 0800 MDT  
ASCENSION NO. 15

SIGNIFICANT LEVEL DATA  
16,0200015  
DON

GEODETIC COORDINATES  
32°57'09" LAT DEG  
106°29'39" LON DEG

TABLE 11

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE FEET	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL.HUM. PERCENT
878.5	4003.7	22.0	15.6	68.0
860.0	4611.2	20.9	13.4	62.0
350.0	4944.9	22.0	13.6	59.0
925.2	5446.8	22.0	10.5	48.0
815.0	6144.7	21.1	8.4	44.0
779.1	7420.0	18.1	7.6	51.0
700.0	10399.1	11.1	5.0	66.0
687.7	10685.6	10.2	4.4	67.0
673.1	11472.1	9.2	•6	55.0
644.9	12636.1	7.7	-2.0	50.0
591.1	14973.9	1.5	•9	96.0
539.1	17393.3	-4.0	-5.8	87.0
519.8	19338.2	-5.5	-6.1	82.0
510.6	18799.8	-5.2	-11.7	60.0
505.7	19049.1	-5.3	-8.0	81.0
500.0	19342.0	-5.3	-9.1	76.0

STATION ALTITUDE 4003.49 FEET MSL  
17 JULY 54 0800 MDT  
ASCENSION NO. 15

UPPER AIR DATA  
1940200015  
CON  
TABLE 12

GEODETIC COORDINATES  
32°57'20" LAT DTG  
106°29'43" LON DEG

GEOMETRIC PRESSURE ALTITUDE "SL FLEET FEET	PRESSURE ALTITUDE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(IN)	WIND DATA KNOTS	INDEX OF REFRACTION
4200.7	876.1	22.0	15.8	68.0	1028.9	671.9	280.0	4.1
4500.0	862.4	21.1	13.8	63.1	1015.1	670.6	247.5	1.7
5000.0	848.4	22.0	13.3	57.8	994.5	671.6	156.2	2.2
5500.0	833.6	21.9	16.3	47.7	978.6	671.1	135.1	4.8
6000.0	819.7	21.2	8.8	44.8	964.1	670.2	131.5	7.2
6500.0	804.8	20.5	8.3	46.0	950.7	669.0	136.4	8.5
7000.0	790.7	19.1	8.0	48.7	937.8	667.7	138.1	9.6
7500.0	776.9	17.5	7.8	51.4	925.0	666.4	135.1	10.1
8000.0	763.0	16.7	7.4	53.9	912.3	665.0	131.1	10.5
8500.0	749.4	15.6	6.9	56.4	899.7	663.6	125.7	10.9
9000.0	736.1	14.6	6.5	59.0	887.4	662.3	120.1	10.1
9500.0	723.0	13.2	6.0	61.5	875.2	660.9	112.7	8.6
10000.0	710.1	12.0	5.4	64.0	867.3	659.5	106.0	7.2
10500.0	697.4	10.9	4.9	66.2	851.3	658.1	97.8	6.0
11000.0	684.8	10.0	3.7	64.7	838.8	657.0	91.2	4.3
11500.0	672.4	9.2	0.6	54.9	826.8	655.8	78.6	2.5
12000.0	660.2	8.5	-0.6	52.7	817.7	654.9	53.6	1.6
12500.0	648.1	7.9	-1.7	50.6	800.9	654.1	17.2	1.3
13000.0	636.2	6.7	-1.1	57.2	789.2	652.8	6.8	1.4
13500.0	624.5	5.4	-0.2	67.0	778.1	651.1	18.8	1.5
14000.0	612.5	4.1	0.4	76.8	767.2	649.9	26.7	1.5
14500.0	601.6	2.8	0.8	86.7	756.5	648.4	30.2	1.4
15000.0	590.5	1.4	0.9	95.9	746.0	646.9	34.3	1.3
15500.0	579.4	0.3	-0.5	94.0	735.3	645.5	43.7	1.5
16000.0	568.5	-0.8	-1.9	92.2	724.6	644.0	50.1	1.9
16500.0	557.7	-2.0	-3.3	90.3	714.2	642.6	51.1	2.3
17000.0	547.6	-3.1	-4.7	88.5	703.8	641.1	48.6	2.7
17500.0	536.9	-4.2	-6.1	86.4	693.4	639.8	1.000175	1.000175
18000.0	526.6	-5.0	-7.3	83.6	682.3	638.8	1.000171	1.000171
18500.0	516.6	-5.4	-9.2	74.3	670.6	638.2	1.000165	1.000165
19000.0	506.7	-5.3	-8.7	76.9	657.4	638.4	1.000164	1.000164

STATION ALTITUDE 4733.65 FEET MSL  
17 JULY 54 0800 MDT  
ASCENSION NO. 15

MANDATORY LEVELS  
1960200015  
D01  
TABLE 13

GEODETIC COORDINATES  
32°57'20" LAT DG  
106°29'39" LON DG

PRESSURE MILLIBARS	GEOPOTENTIAL FLEET	TEMPERATURE			REL.HUM. PERCENT		WIND DATA	
		AIR DEPOINT DEGREES	DEGREE CENTIGRADE	DIRECTION DEGREES(TN)	SPEED KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4941.	22.0	13.6	59.	161.9	137.8	9.0	
800.0	6667.	19.9	8.2	47.	125.8	125.8	10.9	
750.0	6480.	15.6	7.0	56.	99.8	99.8	6.2	
700.0	10182.	11.1	5.0	66.	23.8	23.8	1.3	
650.0	12409.	8.0	-1.5	51.	49.1	49.1	2.6	
600.0	14559.	2.6	-8	88.	30.7	30.7	1.3	
550.0	16850.	-2.8	-4.4	89.	16.1	16.1	1.3	
500.0	19315.	-5.9	-9.1	78.	1.3	1.3	1.3	

SATION ALTITUDE 3959.0 FEET MSL  
17 JULY 94 0845 MDT  
ASCENSION NO. 551

SIGNIFICANT LEVEL DATA  
1940020361  
WHITE SANDS  
TABLE 14

GEODETIC COORDINATES  
32°40'43" LAT D<sup>N</sup>  
106°37'03" LON D<sup>W</sup>

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE FEET	TEMPERATURE AIR DEGREES	DEWPONT CENTIGRADE	REL HUM. PERCENT
879.7	3989.0	26.7	16.8	48.0
874.3	4167.2	24.5	13.8	51.0
850.0	4976.8	22.4	12.1	52.0
821.5	5948.9	20.4	9.9	51.0
802.0	6630.9	20.2	8.8	48.0
741.2	8444.0	15.0	6.3	56.0
707.9	10121.3	11.7	5.6	66.0
700.0	10470.3	11.3	6.4	72.0
675.6	11402.4	8.8	5.9	82.0
663.5	11894.7	8.4	1.3	61.0
644.9	12666.4	7.2	-1.7	53.0
608.3	14238.8	3.6	.5	80.0
595.5	14805.9	1.9	.3	39.0
563.7	16257.3	-.3	-2.8	87.0
549.2	16926.2	-2.1	-7.6	66.0
512.7	18728.6	-5.6	-9.8	72.0
469.1	19910.6	-5.5	-12.4	58.0
502.9	19227.2	-5.6	-7.1	89.0
500.0	19376.5	-5.9	-7.7	87.0

SATION ALTITUDE 1967.0 FEET MSL  
17 JULY 04 0845 MDT  
ASCENSION NO. 21

UPPER AIR DATA  
1900Z 081  
WHITE SANDS  
TABLE 15

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.7033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(UTN)	SPEED KNOTS	INDEX OF REFRACTION
2969.0	1014.6	14.8	48.0	677.1	30.0	6.9	1.00047	
4000.0	1014.7	14.7	48.2	676.9	30.2	9.9	1.000297	
4500.0	1014.7	13.1	51.4	673.4	42.1	8.7	1.000289	
5000.0	1014.7	12.0	52.0	671.8	59.8	7.3	1.000283	
5500.0	1014.7	10.9	51.5	670.5	78.5	7.0	1.000476	
6000.0	1014.7	9.9	50.6	669.3	97.3	7.6	1.000469	
6500.0	1014.7	9.1	48.6	951.5	669.1	112.2	8.8	1.000233
7000.0	1014.7	8.5	49.3	937.8	668.0	114.0	9.4	1.000256
7500.0	1014.7	7.9	51.9	925.1	666.7	115.2	10.0	1.000454
8000.0	1014.7	7.3	52.9	912.5	665.3	113.9	10.2	1.000450
8500.0	1014.7	6.7	54.6	900.2	663.9	110.1	9.9	1.000245
9000.0	1014.7	6.2	57.4	888.1	662.5	106.7	9.7	1.000241
9500.0	1014.7	5.3	60.0	61.1	876.1	661.0	105.0	8.7
10000.0	1014.7	4.0	5.7	65.1	864.4	103.4	103.4	1.000235
10500.0	1014.7	1.1	6.4	72.7	851.2	658.6	99.5	6.4
11000.0	1014.7	9.6	6.2	77.9	839.6	657.1	91.3	5.0
11500.0	1014.7	8.7	5.1	77.6	827.9	655.7	78.4	3.8
12000.0	1014.7	8.2	9	59.9	815.2	654.7	62.1	2.9
12500.0	1014.7	7.5	-1.0	54.7	802.9	653.7	36.9	2.5
13000.0	1014.7	6.4	-1.0	53.7	791.0	652.5	39.0	2.2
13500.0	1014.7	5.3	-3	67.3	779.4	651.3	46.8	2.0
14000.0	1014.7	4.1	-3	75.9	768.0	650.0	53.8	2.1
14500.0	1014.7	2.6	4	94.1	757.4	648.5	54.7	3.0
15000.0	1014.7	1.5	-1	98.7	746.8	646.9	55.2	3.9
15500.0	1014.7	0.6	-1.2	86.0	735.6	645.7	60.1	4.3
16000.0	1014.7	-4	-2.2	87.4	724.5	644.5	64.9	4.6
16500.0	1014.7	-1.3	-4.4	79.5	713.6	643.3	71.9	4.7
17000.0	1014.7	-2.0	-7.7	66.4	702.9	642.0	81.6	4.8
17500.0	1014.7	-3.2	-8.3	67.9	692.1	640.8	1.000174	
18000.0	1014.7	-4.2	-8.9	59.0	681.4	639.6	1.000166	
18500.0	1014.7	-5.2	-9.5	71.2	670.9	618.5	1.000165	
19000.0	1014.7	-5.5	-10.7	66.8	659.1	638.5	1.000161	

STATION ALTITUDE 1982.00 FEET MSL  
17 JULY 84 0845 MDT  
ASCENSION NO. 3H1

MANDATORY LEVELS  
1690020361  
WHITE SANDS

GEODETIC COORDINATES  
32°40.0' LAT DEG  
106.37033 LON DEG

TABLE 16

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	DEGREES CENTIGRADE	TEMPERATURE			REL.HUM. PERCENT			WIND DATA	
			AIR DEWPOINT	DEGREES	CENTIGRADE	DIRECTION DEGREES(TN)	SPEED KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4973.	22.4		12.1		52.	57.9		7.3	
800.0	6696.	20.0		8.8		48.	113.2		9.1	
750.0	8511.	15.8		6.7		55.	110.0		9.9	
700.0	10420.	11.3		6.4		72.	100.4		6.7	
650.0	12439.	7.5		-0.9		55.	39.9		2.5	
600.0	14569.	2.5		-4.		86.	54.8		3.2	
550.0	16881.	-2.0		-7.7		67.	79.6			
500.0	19349.	-5.9		-7.7		87.				

STATION ALTITUDE 3997.7 FEET MSL  
17 JULY 1974 0845 MDT  
ASCENSION NO. 137

SIGNIFICANT LEVEL DATA  
1990C60137  
S M R

GEOGRAPHIC COORDINATES  
32.4034 LAT DEG  
106.42307 LONG DEG

TABLE 11

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
978.8	7997.3	28.0	16.6	44.0
865.5	4439.1	24.1	11.4	45.0
852.0	4958.2	23.4	11.5	47.0
756.7	8254.1	16.4	6.2	51.0
722.1	9557.6	13.4	5.6	59.0
700.0	10415.7	11.2	6.1	71.0
687.6	12905.9	9.5	5.9	72.0
669.2	12014.3	8.2	-5	54.0
591.0	16987.7	1.3	.6	95.0
555.8	16605.9	-2.3	-2.7	97.0
544.8	17128.8	-2.5	-5.6	78.0

STATION ALTITUDE 3997 FEET MSL  
17 JULY 84 0845 MDT  
ASCENSION NO. 137

UPPL AIR DATA  
1990060127  
S M R  
TABLE 18

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES C	AIR DEWPOINT DEGREES C	HUM. PERCENT	SPEED OF SOUND METER KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
3997.1	1000.0	28.0	14.6	44.0	1005.1	678.5	10.0	1.000225
4000.0	1000.7	26.0	14.6	44.0	1009.3	678.5	10.0	1.000294
4500.0	1063.7	24.0	11.4	45.2	1006.5	673.6	21.6	1.000282
5000.0	1048.7	23.3	11.4	47.1	991.4	672.8	42.9	1.000279
5500.0	1033.9	22.2	10.6	47.7	977.7	671.5	76.6	1.000274
6000.0	1019.3	21.2	9.8	48.3	964.3	670.3	106.4	1.000266
6500.0	1005.0	20.1	9.0	48.9	951.0	669.0	119.2	1.000263
7000.0	990.9	19.1	8.3	49.5	938.0	667.7	124.4	1.000256
7500.0	777.1	18.0	7.5	50.1	925.1	666.4	122.2	10.6
8000.0	763.5	16.9	6.7	50.7	912.4	665.1	119.3	1.000247
8500.0	750.0	15.8	6.1	52.5	899.9	663.8	115.1	11.4
9000.0	736.7	14.7	5.9	55.6	887.4	662.5	112.1	10.7
9500.0	723.6	13.5	5.6	58.6	875.1	661.2	109.5	9.2
10000.0	710.6	12.3	5.9	65.2	861.1	659.8	107.5	1.000236
10500.0	697.9	10.9	6.1	72.2	851.5	658.3	105.7	5.9
11000.0	685.2	9.4	5.4	76.0	840.7	656.5	92.4	4.0
11500.0	672.8	8.6	2.6	65.1	827.8	655.5	58.0	2.8
12000.0	660.5	8.2	-4	54.3	815.1	654.6	34.3	2.4
12500.0	648.4	7.1	0	60.7	803.2	653.3	8.9	1.000208
13000.0	636.4	5.9	-4	67.6	791.5	652.0	26.8	1.8
13500.0	624.7	4.6	-6	74.5	780.0	650.7	62.9	1.4
14000.0	613.1	3.6	7	81.4	768.8	649.4	56.7	1.7
14500.0	601.8	2.4	7	88.3	757.7	648.0	51.7	2.0
15000.0	590.7	1.3	6	95.0	746.8	646.7	47.5	1.7
15500.0	579.6	0.2	-5	95.6	735.9	645.3	1.000194	1.000190
16000.0	568.7	-1.0	-1.5	96.3	725.2	643.9	1.000185	1.000185
16500.0	556.0	-2.1	-2.5	96.9	714.6	642.5	1.000178	1.000178
17000.0	547.5	-2.5	-5.0	82.7	702.5	641.9		

STATION ALTITUDE 3097.35 FEET 45L  
17 JULY 84 0845 MDT  
ASCENSION NO. 17

MANDATORY LEVELS  
199000Z0137  
S H R

GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

TABLE 19

PRESSURE MILLIBARS	GEOPOTENTIAL FLEET	TEMPERATURE DEGREES	AIR DEWPOINT DEGREES	REL.HUM. PERCENT	WIND DATA	
					DIRECTION DEGREES(TN)	SPEED KNOTS
950.0	4955.	23.4	11.5	47.	40.4	5.6
800.0	6682.	19.8	8.8	49.	122.5	8.5
750.0	8495.	15.9	6.1	53.	115.1	11.4
700.0	10405.	11.2	6.1	71.	106.1	6.2
650.0	12423.	7.2	-0.1	60.	12.2	2.4
600.0	14569.	2.2	0.7	89.	51.1	2.0
550.0	16859.	-2.6	-4.3	87.		

STATION ALTITUDE 4003.49 FEET MSL  
17 JULY P<sub>4</sub> 0845 MDT  
ASCENSION NG.

SIGNIFICANT LEVEL DATA  
1990°C0016  
DON

GEODETIC COORDINATES  
32°57'20" LAT DEG  
106.29439 LON DEG

TABLE 20

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
979.5	4003.7	25.0	16.7	60.0
870.7	4260.6	23.2	14.2	57.0
950.0	4949.4	21.6	12.2	55.0
840.5	5270.5	22.7	10.8	47.0
910.7	6300.9	21.1	9.4	47.0
723.4	9499.2	13.1	5.5	60.0
700.0	10405.6	10.7	5.7	71.0
682.3	11106.5	8.8	6.3	84.0
645.8	12600.6	7.2	-1.7	53.0
640.2	12836.4	7.1	-1.8	53.0
610.0	14136.3	5.5	-2	79.0
553.2	16722.9	-2.0	-4.0	86.0
516.6	18506.6	-4.5	-11.5	58.0
502.4	19227.4	-6.0	-8.3	84.0
500.0	19350.8	-6.5	-9.2	81.0

STATION ALTITUDE 4035<sup>ft</sup> ELEV.  
17 JULY 24 0845 MDT  
ASCENSION NO. 16

UPPER AIR DATA  
1990200016  
D0N

GEOMETRIC COORDINATES  
32°57'20.9 LAT DEG  
106°29'43.9 LON DEG

TABLE 21

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(CTN)	INDEX OF REFRACTION
4000.7	878.5	25.0	16.7	60.0	1018.0	675.5
4500.0	863.4	22.6	13.5	56.3	1010.0	672.3
5000.0	848.5	21.0	12.0	53.7	996.0	671.1
5500.0	833.8	22.3	10.5	47.0	977.3	671.6
6000.0	819.3	21.6	9.8	47.0	961.0	670.7
6500.0	805.0	20.6	9.2	47.0	949.4	669.5
7000.0	790.8	19.4	8.6	49.8	936.7	668.1
7500.0	776.8	18.1	8.1	51.4	924.3	666.6
8000.0	763.1	16.6	7.5	53.9	912.0	665.0
8500.0	749.6	15.6	6.8	55.9	899.9	663.7
9000.0	736.4	14.3	6.2	58.0	887.9	662.2
9500.0	723.4	13.1	5.5	60.0	876.2	660.7
10000.0	710.4	11.6	5.7	66.1	864.3	659.2
10500.0	697.6	10.4	5.8	72.8	852.6	657.7
11000.0	685.0	9.1	6.2	82.0	841.0	656.2
11500.0	672.5	8.4	4.4	75.8	829.2	655.2
12000.0	660.2	7.6	1.8	65.5	815.3	654.3
12500.0	648.2	7.3	-1.1	55.1	802.5	653.5
13000.0	636.3	6.6	-1.4	56.3	789.7	652.7
13500.0	624.6	5.3	-0.5	66.3	778.7	651.2
14000.0	613.1	3.9	+1	76.3	768.1	649.7
14500.0	601.7	2.7	-0.6	80.0	756.9	648.3
15000.0	590.4	1.7	-1.2	81.3	745.7	647.0
15500.0	579.4	*6	-2.0	82.7	734.7	645.7
16000.0	568.5	-0.5	-2.8	84.0	723.9	644.4
16500.0	557.9	-1.5	-3.0	95.4	713.2	643.1
17000.0	547.1	-2.4	-5.1	81.7	702.2	642.0
17500.0	536.9	-3.1	-7.1	73.8	690.9	641.0
18000.0	526.7	-3.6	-9.2	66.0	679.8	640.1
18500.0	516.7	-4.5	-11.5	58.1	668.8	639.1
19000.0	506.8	-5.5	-9.1	75.8	658.2	638.0

xx WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4031.69 FEET MSL  
17 JULY 84 0845 MDT  
ASCENSION NO. 16

MANDATORY LEVELS  
19902000016  
DCN

GEOGRAPHIC COORDINATES  
32.57209 LAT DEG  
106.29439 LON DEG

TABLE 22

PRESSURE MILLIBARS	GEOPOTENTIAL FLEET	TEMPERATURE		REL.HUM.		WIND DATA	
		AIR DEGREES	Dewpoint CENTIGRADE	PERCENT	DIRECTION DEGREES (TN)	SPEED KNOTS	
850.0	4946.	21.6	12.2	55.	9999.0	9999.0xx	
800.0	6673.	20.2	9.0	49.	9999.0	9999.0xx	
750.0	8488.	15.6	6.9	56.	9999.0	9999.0xx	
700.0	10395.	10.7	5.7	71.	113.7	7.6	
650.0	12412.	7.4	-6	57.	13.0	1.7	
600.0	14560.	2.6	-5	80.	9.8	2.7	
550.0	16853.	-2.2	-4.6	84.	61.6	3.1	
500.0	19324.	-6.5	-9.2	81.			

xx WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3989.00 FEET MSL  
17 JULY 96 0930 MDT  
ASCENSION NO. 362

SIGNIFICANT LEVEL DATA  
1990020362  
WHITE SANDS

GEODETIC COORDINATES  
32.40063 LAT DEG  
106.37033 LON DEG

TABLE 23

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE FEET	TEMPERATURE DEGREES MSL	AIR DEPOINT CENTIGRADE	REL.HUM. PERCENT
979.7	989.0	28.7	14.1	41.0
870.3	4301.9	26.5	13.6	45.0
850.0	4982.2	23.4	12.4	50.0
822.1	5935.7	20.0	11.2	57.0
776.0	7565.6	17.5	7.6	53.0
727.1	9392.0	13.4	5.1	57.0
700.0	10430.1	10.9	6.6	75.0
679.7	11235.6	8.6	5.9	83.0
666.8	11757.7	8.8	*3	55.0
651.9	12372.7	8.3	*5	58.0
603.9	14431.1	2.4	*5	87.0
554.3	16694.5	-2.1	-3.8	88.0
543.2	17222.9	-3.3	-7.4	73.0
535.7	17584.5	-6.1	-7.9	75.0
520.5	18333.0	-4.9	-11.4	66.0
512.7	18721.6	-5.2	-7.3	85.0
500.0	19369.6	-6.0	-10.2	72.0

STATION ALTITUDE 3959.0 FT ELEV. \*SL  
17 JULY 84 0930 MDT  
ASCENSION NO. 342

UPPER AIR DATA  
199020382  
WHITE SANDS

GEOMETRIC COORDINATES  
32.40043 LAT DEG  
106.37033 LNG DEG

TABLE 24

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND METER KNOTS	WIND DATA DIRECTION DEGREES(TN)	INDEX OF REFRACTION
3930.0	879.7	28.7	14.1	41.0	1008.2	679.2	60.0
4000.0	879.4	29.6	14.1	41.1	1008.1	679.1	60.1
4500.0	864.3	25.6	13.3	46.5	1001.2	675.6	63.5
5000.0	849.5	23.3	12.4	50.1	991.7	673.0	66.7
5500.0	834.7	21.6	11.6	53.8	980.5	670.9	69.7
6000.0	820.2	19.9	11.1	56.6	969.1	669.0	72.4
6500.0	805.8	19.1	10.1	55.6	954.9	668.0	75.1
7000.0	791.7	18.4	9.0	56.4	940.9	667.0	78.5
7500.0	777.8	17.6	8.0	53.2	927.1	666.0	83.5
8000.0	766.0	16.0	7.2	54.0	914.2	664.7	89.9
8500.0	750.4	15.4	6.4	55.1	901.6	663.4	99.9
9000.0	737.1	14.3	5.7	56.4	889.3	662.0	101.7
9500.0	724.0	13.1	5.2	59.0	876.9	660.7	101.2
10000.0	711.0	11.4	6.1	67.6	864.5	659.4	88.6
10500.0	696.2	10.7	6.6	75.7	852.4	658.1	74.9
11000.0	685.6	9.3	6.1	80.7	841.2	656.4	56.7
11500.0	673.1	8.7	5.3	68.8	829.4	655.5	50.0
12000.0	660.9	8.0	4.4	56.2	814.2	655.1	43.2
12500.0	646.8	7.6	4.6	59.8	901.1	656.4	46.1
13000.0	636.9	6.9	4.8	66.8	790.7	652.7	49.9
13500.0	625.2	5.1	4.6	73.9	779.7	651.1	58.1
14000.0	613.7	3.6	4.7	80.9	769.3	649.4	67.8
14500.0	602.3	2.3	3.5	87.0	759.9	647.8	78.8
15000.0	591.0	1.3	3.6	87.3	747.5	646.6	90.4
15500.0	579.9	0.3	1.6	87.5	736.3	645.3	99.4
16000.0	569.1	-0.7	-2.5	87.7	725.2	644.1	104.9
16500.0	556.4	-1.7	-3.4	87.9	714.4	642.9	107.1
17000.0	547.0	-2.8	-5.9	79.3	704.0	641.4	106.6
17500.0	537.4	-3.9	-7.8	74.5	693.7	640.0	105.4
18000.0	527.2	-4.5	-9.8	66.6	652.7	639.2	102.9
18500.0	517.1	-5.0	-9.5	70.6	670.4	638.6	102.9
19000.0	507.2	-5.5	-8.5	73.6	658.7	638.1	102.9

STATION ALTITUDE 3930.00 FEET MSL  
17 JULY 84 0930 MDT  
ASCENSION 40.

MANDATORY LEVELS  
1500020362  
WHITE SANDS

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

TABLE 25

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE			REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(CTN)	SPEED KNOTS
		AIR DEGREES	DEWPONT DEGREES	CENTIGRADE			
259.0	4980.	23.4	12.4	50.	66.6	6.4	
800.0	6702.	18.8	9.6	55.	76.3	7.3	
750.0	6512.	15.4	6.4	55.	101.8	10.4	
700.0	10420.	10.9	6.6	75.	77.3	6.0	
650.0	12438.	8.1	•6	59.	45.7	4.1	
600.0	14586.	2.1	•1	87.	81.1	3.4	
550.0	16976.	-2.6	-5.2	82.	106.7	5.8	
500.0	19342.	-6.0	-10.2	72.			

STATION ALTITUDE 3997.30 FEET 45L  
17 JULY 84 0932 MDT  
ASCENSION NO. 118

## SIGNIFICANT LEVEL DATA

1990060138

S M R

TABLE 26

GEODETIC COORDINATES  
32°46'03" LAT DEG  
106°42'30" LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
879.8	3997.3	29.2	40.0
872.0	4256.7	26.3	38.0
850.0	4994.3	24.2	42.0
792.2	7002.5	19.3	44.0
731.8	9224.0	14.0	52.0
700.0	10451.1	11.1	66.0
679.1	11281.5	9.0	80.0
660.9	12022.0	8.7	54.0
642.9	12772.0	7.4	54.0
605.6	14378.7	2.6	79.0
589.9	15077.7	1.8	75.0
570.2	15976.1	-0.5	88.0
553.0	16780.3	-2.1	83.0
547.3	17051.5	-2.2	73.0
530.7	17854.7	-3.8	67.0

STATION ALTITUDE 3997.50 FEET MSL  
17 JULY 84 0932 MDT  
ASCENSION NO. 17

UPPER AIR DATA  
1990060138  
S R R

TABLE 27

GEODETIC COORDINATES  
32°48'03" LAT DEG  
106°42'30" LON DEG

GEOMETRIC PRESSURE ALTITUDE ASL FEET	TEMPERATURE AIR DEPOINT MILLIBARS DEGREES CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND METER KNOTS	WIND DATA DIRECTION DEGREES(N)	WIND SPEED KNOTS	INDEX OF REFRACTION
2997.3	679.8	29.2	14.2	40.0	1006.6	679.8
4000.0	679.7	29.2	14.2	40.0	1006.7	679.7
4500.0	664.7	25.6	10.8	39.3	1002.6	675.3
5000.0	649.8	24.2	10.5	42.0	990.1	673.7
5500.0	635.1	23.0	9.6	42.5	977.1	672.2
6000.0	620.5	21.7	8.6	43.0	964.3	670.7
6500.0	606.3	20.5	7.7	43.5	951.7	669.3
7000.0	792.3	19.3	6.8	44.0	939.3	667.8
7500.0	778.3	18.1	6.3	45.6	926.5	666.4
8000.0	764.5	16.9	5.7	47.0	914.0	665.0
8500.0	751.0	15.7	5.2	49.4	901.6	663.6
9000.0	737.7	14.5	4.6	51.2	889.4	662.2
9500.0	724.5	13.3	4.7	55.6	877.1	660.9
10000.0	711.5	12.2	5.1	62.1	864.7	659.6
10500.0	696.8	11.0	5.5	68.7	852.6	658.3
11000.0	686.1	9.7	5.7	75.3	840.7	656.9
11500.0	673.7	8.9	6.2	72.3	828.2	655.8
12000.0	661.4	8.7	7.1	54.8	814.6	655.2
12500.0	649.4	7.9	-0.8	54.0	802.1	654.2
13000.0	637.5	6.7	-1.0	57.5	790.7	652.9
13500.0	625.7	5.3	-6	65.3	780.0	651.2
14000.0	614.2	3.9	-5	73.1	769.5	649.6
14500.0	602.8	2.6	-8	78.3	758.8	648.1
15000.0	591.6	1.9	-2.0	75.4	746.8	647.2
15500.0	580.6	.7	-2.2	81.1	736.1	645.8
16000.0	569.7	-6	-2.4	87.9	725.8	644.2
16500.0	556.9	-1.6	-3.8	94.7	714.7	643.0
17000.0	548.4	-2.2	-6.0	74.9	703.1	642.2
17500.0	536.0	-3.1	-7.6	69.6	692.3	641.0

STATION ALTITUDE 3947.30 FEET MSL  
17 JULY 04 0932 MDT  
ASCENSION ISL. 1°S

MANDATORY LEVELS  
1990060138  
S M R

GEODETIC COORDINATES  
32°48'03.4" LAT DLG  
106°42'50.7" LON DLG

TABLE 28

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE		REL.HUM. PERCENT	WIND DATA	
		AIR DEGREES	DEWPNT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4991.	26.2	10.5	42.	39.6	7.7
800.0	6720.	20.0	7.3	44.	91.2	6.2
750.0	5533.	15.6	5.1	50.	112.4	9.8
700.0	16441.	11.1	5.4	68.	92.7	7.3
650.0	12461.	7.9	-0.8	54.	44.2	1.7
600.0	14609.	2.4	-1.1	78.	60.2	1.6
550.0	16901.	-2.2	-5.5	78.		

STATION ALTITUDE 4003.64 FEET MSL  
17 JULY 1944 0930 MDT  
ASCENSION NO. 17

SIGNIFICANT LEVEL DATA  
1040200017  
DON

GEODETIC COORDINATES  
32°57'20" LAT DEG  
106°29'43" LON DEG

TABLE 29

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE FEET MSL	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
878.6	4003.7	27.0	16.0	51.0
874.1	4152.6	26.0	14.9	50.0
850.0	4559.4	23.4	12.7	51.0
836.5	5416.1	22.1	12.4	54.0
799.3	6714.8	20.7	9.0	47.0
736.1	9032.8	14.9	6.5	57.0
710.1	10029.2	11.9	5.1	63.0
700.0	10423.5	11.0	5.5	69.0
684.8	11025.7	9.9	6.2	78.0
676.6	11355.1	9.3	2.6	63.0
659.4	12057.5	9.1	-0.8	50.0
623.8	13132.3	6.7	-1.9	54.0
597.5	14715.4	2.6	-2	88.0
561.0	16386.0	-0.4	-3.6	78.0
542.9	17246.8	-2.4	-5.4	80.0
537.4	17513.0	-2.5	-6.8	72.0
521.9	18280.4	-4.2	-7.4	78.0
512.1	18766.6	-5.4	-9.3	74.0
500.0	19384.4	-5.8	-6.5	95.0

STATION ALTITUDE 40369 FEET "SL  
17 JULY 84 0930 MDT  
ASCENSION NO. 1;

UPPER AIR DATA  
1090200017  
DON

GEOMETRIC COORDINATES  
32°57'20" LAT DEG  
106°29'43" LON DEG

TABLE 30

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TH)	INDEX OF REFRACTION
4307.7	878.0	27.0	51.0	1011.7	677.6	300.0
4500.0	863.6	24.5	50.4	1002.5	674.9	310.8
5000.0	848.9	23.3	51.3	991.0	673.0	333.6
5500.0	834.1	22.0	52.2	978.1	671.5	355.3
6000.0	819.6	21.5	50.9	963.3	670.7	64.5
6500.0	805.3	20.9	48.2	946.7	670.0	130.2
7000.0	791.4	20.0	48.2	935.2	668.8	109.8
7500.0	777.3	18.7	50.4	922.8	667.4	115.7
8000.0	763.6	17.5	52.5	910.5	665.9	117.8
8500.0	750.2	16.2	7.1	54.7	898.5	664.4
9000.0	737.0	15.0	6.5	56.9	886.6	662.9
9500.0	723.8	13.5	5.8	59.8	875.4	661.2
10000.0	710.2	12.0	5.1	62.8	864.4	659.4
10500.0	696.0	10.5	5.6	70.1	852.0	658.2
11000.0	685.4	9.5	6.2	77.6	839.0	657.2
11500.0	673.0	9.3	2.0	60.3	826.9	656.0
12000.0	660.8	9.1	-5.1	51.1	812.8	655.6
12500.0	648.7	8.1	-1.2	51.6	800.9	654.4
13000.0	636.9	7.0	-1.8	53.5	789.5	653.1
13500.0	625.2	5.7	-1.0	61.9	778.2	651.7
14000.0	613.6	4.5	-0.0	72.6	767.2	650.3
14500.0	602.3	3.2	.6	83.4	756.3	648.9
15000.0	591.1	2.1	.0	86.3	745.2	647.6
15500.0	580.1	1.2	-1.3	83.3	733.9	646.4
16200.0	569.2	.3	-2.7	80.3	722.8	645.2
16500.0	558.6	-.7	-4.0	78.3	711.9	644.1
17200.0	548.0	-1.6	-4.9	79.4	701.6	642.7
17500.0	537.7	-2.5	-6.6	72.4	690.2	641.7
18000.0	527.4	-3.6	-7.2	75.8	679.9	640.5
18500.0	517.4	-4.7	-8.1	76.2	669.9	639.0
19000.0	507.5	-5.6	-6.1	81.9	659.0	638.1

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STATION ALTITUDE 4703.69 FEET ASL  
17 JULY 84 0930 MDT  
ASCENSION NO. 17

MANDATORY LEVELS  
1940200017  
DON

GEODETIC COORDINATES  
32.57209 LAT DEG  
106.29439 LON DEG

TABLE 31

PRESSURE MILLIBARS	GEOPOTENTIAL FLEET	TEMPERATURE			REL.HUM. PERCENT	WIND DATA	
		AIR DEWPONT	DEGREES	CENTIGRADE		DIRECTION DEGREES(TH)	SPEED KNOTS
850.0	4056.	23.4	12.7	51.	330.9	4.0	
800.0	6685.	20.7	9.1	47.	104.3	7.3	
750.0	8503.	16.2	7.1	55.	112.6	12.3	
700.0	10413.	11.0	5.5	69.	91.3	8.3	
650.0	12435.	8.2	-1.2	51.	21.0	.8	
600.0	14587.	2.9	.7	86.	346.3	1.1	
550.0	16885.	-1.6	-6.7	79.	118.1	3.2	
500.0	19357.	-5.8	-6.5	95.			

**D A T E**  
**F I L M E**